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2500 DOCKERY LANE
RALEIGH, NC 27606

EXAMINER	
CHIN, RICKY	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/764,011	PEDLOW ET AL.	
	Examiner	Art Unit	
	RICKY CHIN	2423	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 March 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27 and 44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27 and 44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed March 23, 2009 have been fully considered but are not persuasive. Applicant argues that Tiwari fails to store a duplicate of the I-frames. The examiner notes that Tiwari fails to teach of storing a duplicating of the I-frames and therefore relied on Zdepski and one of ordinary skill in the art as disclosed in applicant's own admission to disclose the storing of a duplicate of the I-frames (See Prior Office Action, top of page 4).

The applicant also argues that Zdepski teaches away from index lookups and is improperly modified by the addition of indices since Zdepski is striving to eliminate them. The examiner agrees that Zdepski teaches away from index lookups and would be improper to modify Zdepski to add indices and index lookups. Thus, the examiner in the prior office action reversed the order of references such that the examiner relies on Tiwari who advocates and incorporates indices/index lookups (col. 4 lines 20-30 and col.5 lines 35-50) and modifies Tiwari to incorporate elements notoriously well known in the art as well as in Zdepski. Thus, the argument is moot since Zdepski s no longer being modified to incorporate index lookups.

The Applicant further acknowledges that it is well known to create two trick play files for fast forward and fast reverse using I-frames in a reverse file and I-frames in a fast forward file with two associated sets of indices as indicated in applicants admitted prior art of figs. 2A and 2B. However, the applicant argues that although it is well known to create the two indices, that storing the indices to address the single second file of I-

frames to accomplish the trick play of fast forward and fast reverse is not well-known. The examiner respectfully disagrees. Storing indices is at least obvious if not inherent in order for the trick play functions of fast reverse and fast forward to function. If the indices were not stored then the trick play functions would not be able to refer back and look up the locations of the correct I-frames for trick play to occur. Therefore, not only do the applicants admitted prior art of Figs. 2A and 2B teach of creating of the indices, but also storing of the indices.

Thus, for the reasons stated above, the rejections are maintained. Furthermore, applicant amended claims 19 and 44, are moot in view of the new ground of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-19 rejected under 35 U.S.C. 103(a) as being unpatentable over Tiwari et al., US 6,327,421 in view of Zdepski et al., US 6,445,738.

Regarding claims 1, Tiwari discloses a method of storing digital video content to facilitate trick play(See Abstract), the content comprising intra-coded frames of video and inter-coded frames of video(See col. 1 lines 28-40 which discloses MPEG, I, B, and

P frames), the method comprising: storing the inter-coded and the intra-coded frames of the content in a first file(See col. 4 lines 1-18 which discloses memory for storing the original compressed picture data stream); storing a duplicate of frames of the content in a second file(See col. 4 lines 10-28, which discloses storing a subset of the originally picture stream e.g. every n'th picture); storing a set of forward indices that relates the intra coded frames with the inter-coded frames in a forward direction such that playback of the second file in the order of the forward indices simulates a fast-forward playback (See col. 4 lines 10-33; col. 4 lines 59- col. 5 lines 40 which discloses the look up table used to identify the encoded pictures in the ancillary stream and determining the byte offset of the GOP to start the fast forward as well as to resume playback from the original stream, thus referencing the frames from the second file to the original file); and storing a set of reverse indices that relates the intra-coded frames with the inter-coded frames in a reverse direction such that playback of the second file in the order of the reverse indices simulates a fast-reverse playback (See col.5 lines 40-50 which discloses reading the pictures from the ancillary stream in the reverse order, thus the stored lookup table has the functionality of referencing frames in both a forward and a reverse direction making the lookup table a stored set of reverse and forward indices. To store the indices in two different indices composing of a separate forward indices and a separate reverse indices is merely a separation of the disclosed look up table component which performs both functionalities. Furthermore, the separation of such a look up table capable of referencing frames from the original file with that of a second

file is notoriously well-known in the art as admitted by applicant in Fig. 2A, and Fig. 2B as prior art)

Tiwari does not explicitly teach of wherein the storing a duplicate of frames of the content in a second file are intra-coded frames. However, in the same field of endeavor, Zdepski teaches of storing intra-coded frames into a duplicate file (See col. 4 lines 38-65 which discloses storing I-frames into one or more files and wherein the video sequence comprises only one of every X or n'th frame of the original wherein 1/X is the frequency of the I-frames in the original stream). Furthermore, it is notoriously well-known in the art at the time of the invention to have stored a copy of I-frames into a separate file as is disclosed in Applicant's own admission of prior art (See applicant's Fig. 2, elements 78 and 80 labeled as prior art which illustrate a duplicate of I-frames stored in a second file);

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the teachings of Tiwari to incorporate wherein the storing a duplicate of frames of the content in a second file are intra-coded frames as taught by Zdepski to be able to provide the user with seamless trickplay such as fast forward and fast reverse as the user is watching the video and to provide a preferable entry point as I frames do not need to reference any other frame.

Regarding claim 2, the combination further discloses all of the claim limitations of the method according to claim 1, further the combination teaches of generating the

set of forward indices and the set of reverse indices for storage (See Tiwari, See col. 4 lines 10-33;col 5 lines 40-50, in which it would be inherent for the indices to be stored since the video server indexes into a look-up table).

Regarding claim 3, the combination discloses all of the claim limitations of the method according to claim 1, further the combination teaches of wherein the digital video content is MPEG encoded, wherein the intra-coded frames comprise I-frames, and wherein the inter-coded frames comprise P-frames and B-frames(It is an inherent feature of MPEG to compose of intra-coded frames (I-frames) and inter-coded frames(B,P frames)).

Regarding claim 4, the combination discloses all of the claim limitations of the method according to claim 1, further the combination teaches of retrieving the inter-coded and the intra-coded frames from the first file to produce a normal playback stream(See Zdepski, col.7, lines 20-23 which disclose that the system receives a normal play bitstream; Tawari, col. 4 lines 10-33; col. 4 lines 59- col. 5 lines 40).

Regarding claim 5, the combination discloses all of the claim limitations of the method according to claim 4, the combination further teaches of retrieving the intra-coded frames from the second file in the order of the forward indices to produce a fast forward playback stream, and wherein the retrieving of intra-coded frames from the second file starts at a frame near a current playback point in the normal playback

stream, and wherein the frame near the current playback point is determined from the forward indices(See Zdepski, col. 3 lines 56-67 and col. 4 lines 1-16, which disclose that the respective fast forward trick play stream is then transferred to the user at the appropriate point where the user was watching; See Tiwari, col. 4 lines 10-33;col 5 lines 40-50 which addresses the forward indices for fast forward).

Regarding claim 6, the combination discloses all of the claim limitations of the method according to claim 1, the combination further teaches of retrieving the intra-coded frames from the second file in the order of the forward indices to produce a fast forward playback stream (See Tiwari, col. 4 lines 10-33;col 5 lines 40-50; See Zdepski, col. 10, lines 34-46).

Regarding claim 7, the combination discloses all of the claim limitations of the method according to claim 6, further the combination teaches of retrieving the inter-coded and intra-coded frames from the first file in the order of the forward indices to produce a normal playback stream, and wherein the retrieving of inter-coded and intra-coded frames from the first file starts at a frame near a current playback point in the fast forward playback stream, and wherein the frame near the current playback point is determined from the forward indices(See Zdepski, col. 3 lines 56-67 and col. 4 lines 1-16, which disclose that the respective fast forward trick play stream is then transferred to the user at the appropriate point where the user was watching; See Tiwari, col. 4 lines 10-33;col 5 lines 40-50 which addresses forward indices for fast forward).

Regarding claim 8, the combination discloses all of the claim limitations of the method according to claim 1, further the combination teaches of retrieving the intra-coded frames from the second file in the order of the reverse indices to produce a fast reverse playback stream(See Tiwari, col. 4 lines 10-33;col 5 lines 40-50 which addresses reversing indices for reverse playback; Zdepski, col. 8 lines 33-42, which discloses that for a fast reverse trick play the verifier/Fixer 104 reveres the order of the sequence header/I frame groupings or tuples to produce a reverse play sequence).

Regarding claim 9, the combination teaches all of the claim limitations of the method according to claim 8, further the combination teaches of retrieving the inter-coded and intra-coded frames from the first file in the order of the forward indices to produce a normal playback stream, and wherein the retrieving of inter-coded and intra-coded frames from the first file starts at a frame near a current playback point in the fast reverse playback stream, and wherein the frame near the current playback point is determined from the reverse indices(See Zdepski, col. 3 lines 56-67 and col. 4 lines 1-16, which disclose that the respective fast reverse trick play stream is then transferred to the user at the appropriate point where the user was watching; See Tiwari, col. 4 lines 10-33;col 5 lines 40-50which addresses indices for reverse playback).

Regarding claim 10, the claim has been analyzed and rejected for the same reasons set forth in the rejection of claim 1. Furthermore, Tiwari (See col. 4 lines 10-33;

col 5 lines 40-50) discloses of reversing the stored indices for reverse playback and Zdepski (See Zdepski, col. 8, lines 33-40 and Tiwari, col. 5 lines 40-50) discloses reversing the order of sequence for reverse trick play.

Regarding claim 11, the combination teaches all the claim limitations of the method according to claim 10, further the combination teaches of generating the set of indices for storage (See Tiwari, col. 4 lines 10-33;col 5 lines 40-50, in which it would be inherent that the indices would be stored since the video server indexes into a look-up table.)

Regarding claim 12, the combination teaches all the claim limitations of the method according to claim 10, further the combination teaches of wherein the digital video content is MPEG encoded, wherein the intra-coded frames comprise I-frames, and wherein the inter-coded frames comprise P-frames and B-frames. (It is an inherent feature of MPEG to compose of intra-coded frames (I-frames) and inter-coded frames(B,P frames)).

Regarding claim 13, the combination teaches all the claim limitations of the method according to claim 10, further the combination teaches of retrieving the inter-coded and the intra-coded frames from the first file to produce a normal playback stream (See Zdepski, col.7, lines 20-23 which disclose that the system receives a normal play bitstream; See Tiwari, col. 4 lines 10-33;col 5 lines 40-50).

Regarding claim 14, the combination teaches all the claim limitations of the method according to claim 13, further the combination teaches of retrieving the intra-coded frames from the second file in a first order of the indices to produce a fast forward playback stream, and wherein the retrieving of intra-coded frames from the second file starts at a frame near a current playback point in the normal playback stream, and wherein the frame near the current playback point is determined from the indices (See Tiwari, col. 4 lines 10-33;col 5 lines 40-50 which addresses indices for forward playback; Zdepski, col. 3 lines 56-67 and col. 4 lines 1-16, which disclose that the respective fast forward trick play stream is then transferred to the user at the appropriate point where the user was watching).

Regarding claim 15, the combination teaches all the claim limitations of the method according to claim 10, further the combination teaches of retrieving the intra-coded frames from the second file in a first order of the indices to produce a fast forward playback stream (See Tiwari, col. 4 lines 10-33;col 5 lines 40-50 which addresses indices for fast forward playback; Zdepski, col. 10, lines 34-46).

Regarding claim 16, the combination teaches all the claim limitations of the method according to claim 15, further the combination teaches of retrieving the inter-coded and intra-coded frames from the first file to produce a normal playback stream, and wherein the retrieving of inter-coded and intra-coded frames from the first file starts

at a frame near a current playback point in the fast forward playback stream, and wherein the frame near the current playback point is determined from the indices (See Zdepski, col. 3 lines 56-67 and col. 4 lines 1-16, which disclose that the respective fast forward trick play stream is then transferred to the user at the appropriate point where the user was watching; (See Tiwari, col. 4 lines 10-33;col 5 lines 40-50 which addresses indices for fast forward playback).

Regarding claim 17, the combination teaches all the claim limitations of the method according to claim 10, further the combination teaches of retrieving the intra-coded frames from the second file in a second order of the indices to produce a fast reverse playback stream (See Tiwari, See col. 4 lines 10-33;col 5 lines 40-50 which addresses indices for fast reverse playback; See Zdepski, col. 8 lines 33-42, which discloses that for a fast reverse trick play the verifier/Fixer 104 reveres the order of the sequence header/I frame groupings or tuples to produce a reverse play sequence).

Regarding claim 18, the combination teaches all the claim limitations of the method according to claim 17, further the combination teaches of retrieving the inter-coded and intra-coded frames from the first file to produce a normal playback stream, and wherein the retrieving of inter-coded and intra-coded frames from the first file starts at a frame near a current playback point in the fast reverse playback stream, and wherein the frame near the current playback point is determined from the indices(See Zdepski, col. 3 lines 56-67 and col. 4 lines 1-16, which disclose that the respective fast

reverse trick play stream is then transferred to the user at the appropriate point where the user was watching; See Tiwari, col. 4 lines 10-33;col 5 lines 40-50 which addresses indices for fast reverse playback).

Regarding claim 19, the claim has been analyzed and rejected for the same reasons set forth in the rejection of claim 1, since the inter-coded frames of the content are still stored in a first file (the original file, having the normal play content) and storing of intra-coded frames are still being stored in a second file (the extracted, I frames being stored as a duplicate).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 19-27, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boyle, US 6,453,115 in view of Tiwari et al., US 6,327,421 and in further view of Lev et al., US 6,057,832.

Regarding claim 19, Boyle and Tiwari discloses a method of storing digital video content to facilitate trick play, the content comprising intra-coded frames of video and inter-coded frames of video([Boyle], see abstract which discloses MPEG; Tiwari, see Abstract which also discloses MPEG). Boyle and Tiwari further disclose storing a set of

forward and reverse indices that relate the intra-coded frames to the inter-coded frames in a forward direction and reverse direction for simulating fast-reverse and fast-forward playback([Boyle], col.3 lines 1-45 and col.6 38-50, which disclose a storage subsystem and storage controller wherein the storage controller identifies a start of the intra-coded reference frames and generates an index data structure. Furthermore the controller also identifies the start of the predictive coded reference frames and generates an index structure providing data indicative of the location of the predictive coded frames for implementing trickplay functions such as fast forward and rewind; Tiwari, See col. 4 lines 10-33; col. 4 lines 59- col. 5 lines 40 which discloses the look up table used to identify the encoded pictures in the ancillary stream and determining the byte offset of the GOP to start the fast forward as well as to resume playback from the original stream, thus referencing the frames from the second file to the original file and col.5 lines 40-50 which discloses reading the pictures from the ancillary stream in the reverse order, thus the stored lookup table has the functionality of referencing frames in both a forward and a reverse direction making the lookup table a stored set of reverse and forward indices. To store the indices in two different indices composing of separate forward indices and separate reverse indices is merely a separation of the disclosed look up table component which performs both functionalities. Furthermore, the separation of such a look up table capable of referencing frames from the original file with that of a second file is notoriously well-known in the art as admitted by applicant in Fig. 2A, and Fig. 2B as prior art).

However, the teachings of Boyle and Tiwari do not explicitly teach of the method comprising: at a video demand system for a television service provider: storing the inter-coded frames of the content in a first file and storing the intra-coded frames of the content in a second file and where, commands received at the tv service provider from a subscriber terminal requesting trick play modes are implemented by retrieving inter-coded frames from the first file using either the forward or the reverse indices. However, in the same field of endeavor Lev teaches of wherein at a video demand system for a television service provider (See col. 1 lines 53-55 which discloses a vod system): storing the inter-coded frames of the content in a first file and storing the intra-coded frames of the content in a second file (See col. 5 lines 22-67;col. 6 lines 45-47; and Fig.5, elements 2 and 3) and where, commands received at the tv service provider from a subscriber terminal requesting trick play modes are implemented by retrieving inter-coded frames from the first file using either the forward or the reverse indices (See col. 5 lines 30-35 which discloses receiving user requests at the server and col.5 lines 55-67 ;col. 6 lines 48-63; and col. 7 lines 45-60 which discloses that the pointer file includes the addresses of each of the frames in the anchor and complementary data file and for trickmode playback such as fast forward to normal mode, the files are merged, thus the indices must be used to synchronize the correct order).

Therefore it would have been obvious of one of ordinary skill in the art to have modified the teachings of Boyle and Tiwari to incorporate at a video demand system for a television service provider: storing the inter-coded frames of the content in a first file and storing the intra-coded frames of the content in a second file and where, commands

received at the tv service provider from a subscriber terminal requesting trick play modes are implemented by retrieving inter-coded frames from the first file using either the forward or the reverse indices as taught by Lev for the benefit of allowing trickplay functions which can be accessed more readily for display and increasing the efficiency of transmission of the video stream while still permitting display that is more flexible (Boyle, col.10 lines 54-65; col. 14 lines 1-15).

Regarding claim 20, the combination teaches all the claim limitations of the method according to claim 19, the combination further teaches of generating the set of forward indices and the set of reverse indices for storage. ([Boyle], col.3 lines 1-45 and col.6 38-50, which disclose a storage subsystem and storage controller wherein the storage controller identifies a start of the intra-coded reference frames and generates an index data structure. Furthermore the controller also identifies the start of the predictive coded reference frames and generates an index structure providing data indicative of the location of the predictive coded frames for implementing trickplay functions such as fast forward and rewind; Tiwari, col. 4 lines 10-33; col 5 lines 40-50 which addresses forward and reversed indices).

Regarding claim 21, the combination teaches the claim limitations of the method according to claim 19, the combination further teaches of wherein the digital video content is MPEG encoded, wherein the intra-coded frames comprise I-frames, and wherein the intra-coded frames comprise P-frames and B-frames. ([Boyle], see

abstract which discloses MPEG; Tiwari, see Abstract which also discloses MPEG).

Regarding claim 22, the combined teachings of Boyle, Tiwari and Lev teach all the claim limitations of the method according to claim 19, the combination further teaches of retrieving the inter-coded frames from the first file and the intra-coded frames from the second file to produce a normal playback stream.([Lev], col.2 lines 43-50, which discloses the merging of the anchor and complimentary files to produce normal playback)

Regarding claim 23, the combined teachings of Boyle, Tiwari and Lev teach all the claim limitations of the method according to claim 22, the combination further teaches of retrieving the intra-coded frames from the second file in the order of the forward indices to produce a fast forward playback stream, and wherein the retrieving of intra-coded frames from the second file starts at a frame near a current playback point in the normal playback stream, and wherein the frame near the current playback point is determined from the forward indices. (See Boyle col.12 lines 48-60 which discloses displaying from that point in normal mode from where the skip location is desired; Tiwari, col. 4 lines 10-33; col 5 lines 40-50 which addresses forward and reversed indices. Furthermore, playing a fast forward stream from a point near the normal playback is well-known in the art as [Zdepski], See col. 3 lines 56-67 and col. 4 lines 1-16, discloses that the respective fast forward trick play stream is then transferred to the user at the appropriate point where the user was watching and further discloses that the

look-up table includes a plurality of indices which reference respective frames)

Regarding claim 24, the combined teaching of Boyle, Tiwari and Lev teach all the claim limitations of the method according to claim 19, the combination further teaches of retrieving the intra-coded frames from the second file in the order of the forward indices to produce a fast forward playback stream. ([Boyle], col.3 lines 1-45 and col.6 38-50, which disclose a storage subsystem and storage controller wherein the storage controller identifies a start of the intra-coded reference frames and generates an index data structure. Furthermore the controller also identifies the start of the predictive coded reference frames and generates an index structure providing data indicative of the location of the predictive coded frames for implementing trickplay functions such as fast forward and rewind; Tiwari, col. 4 lines 10-33; col 5 lines 40-50 which addresses forward and reversed indices). Furthermore, producing fast forward playback from forward indices is well known- in the art as discloses by ([Zdepski], col. 10, lines 34-46).

Regarding claim 25, the combined teachings of Boyle, Tiwari and Lev teach all the claim limitations of the method according to claim 24, the combination further teaches of retrieving the intra-coded frames from the second file and the inter-coded frames from the first file in the order of the forward indices to produce a normal playback stream, and wherein the retrieving of the inter-coded frames from the first file starts at a frame near a current playback point in the fast forward playback stream, and wherein the frame near the current playback point is determined from the forward indices. (

[Boyle], col.3 lines 1-45 and col.6 38-50, which disclose a storage subsystem and storage controller wherein the storage controller identifies a start of the intra-coded reference frames and generates an index data structure. Furthermore the controller also identifies the start of the predictive coded reference frames and generates an index structure providing data indicative of the location of the predictive coded frames for implementing trickplay functions such as fast forward and rewind; Tiwari, col. 4 lines 10-33; col 5 lines 40-50 which addresses forward and reversed indices). Furthermore, it is well known- in the art as disclosed by [Zdepski], col. 3 lines 56-67 and col. 4 lines 1-16, which disclose that the respective fast forward trick play stream is then transferred to the user at the appropriate point where the user was watching).

Regarding claim 26, the combined teachings of Boyle, Tiwari, and Lev teach all the claim limitations of the method according to claim 19, the combination further teaches of retrieving the intra-coded frames from the second file in the order of the reverse indices to produce a fast reverse playback stream. ([Boyle], col.3 lines 1-45 and col.6 38-50, which disclose a storage subsystem and storage controller wherein the storage controller identifies a start of the intra-coded reference frames and generates an index data structure. Furthermore the controller also identifies the start of the predictive coded reference frames and generates an index structure providing data indicative of the location of the predictive coded frames for implementing trickplay functions such as fast forward and rewind; Tiwari, col. 4 lines 10-33; col 5 lines 40-50 which addresses forward and reversed indices). Furthermore, it is well known- in the art as discloses by

([Zdepski], col. 8 lines 33-42, which discloses that for a fast reverse trick play the verifier/Fixer 104 reveres the order of the sequence header/I frame groupings or tuples to produce a reverse play sequence).

Regarding claim 27, the combined teachings of Boyle, Tiwari, and Lev teach all the claim limitations of the method according to claim 26, the combination further teaches of retrieving the intra-coded frames from the second file and the inter-coded frames from the first file in the order of the forward indices to produce a normal playback stream, and wherein the retrieving of intra-coded frames from the second file and the inter-coded frames from the first file starts at a frame near a current playback point in the fast reverse playback stream, and wherein the frame near the current playback point is determined from the reverse indices. ([Boyle], col.3 lines 1-45 and col.6 38-50, which disclose a storage subsystem and storage controller wherein the storage controller identifies a start of the intra-coded reference frames and generates an index data structure. Furthermore the controller also identifies the start of the predictive coded reference frames and generates an index structure providing data indicative of the location of the predictive coded frames for implementing trickplay functions such as fast forward and rewind; Tiwari, col. 4 lines 10-33; col 5 lines 40-50 which addresses forward and reversed indices. Furthermore, it is well known- in the art as disclosed by [Zdepski], col. 3 lines 56-67 and col. 4 lines 1-16, which disclose that the respective fast reverse trick play stream is then transferred to the user at the appropriate point where

the user was watching and that the look-up table includes a plurality of indices which reference respective frames).

Regarding claim 44, the claim has been analyzed and rejected for the same reasons set forth in the rejection of claim 19. Performing said method of claim 19 would imply and necessitate a storage device of claim 44.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ricky Chin whose telephone number is 571-270-3753. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Koenig can be reached on 571-272-7296. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Ricky Chin/
Patent Examiner
AU 2423
(571) 270-3753
Ricky.Chin@uspto.gov

/Andrew Y Koenig/
Supervisory Patent Examiner, Art Unit 2423